

AMENDMENTS TO THE CLAIMS

1.(currently amended): A synchronization tracking circuit for synchronizing the phase of a desreading code sequence on a receiving side to the phase of a spreading code sequence on a transmitting side, comprising:

~~a DLL circuit for performing synchronization tracking by DLL (Delay Locked Loop) control; and~~

~~an interference component estimation unit for estimating an interference component inflicted by another path upon a prescribed path of interest among multiple paths;~~

~~wherein said DLL circuit executes DLL control for causing the phase of the desreading code sequence on the receiving side to be synchronized with and track the phase of the spreading code on the transmitting side based upon a signal obtained by eliminating the interference component, which is inflicted from the other path, from a despread signal obtained by desreading a receive signal~~

a desreading code sequence generator for generating a desreading code sequence on the receiving side;

a despreader for generating first and second despread signals by desreading a receive signal by the desreading code sequence on the receiving side at a first timing, that leads by a predetermined phase, timing of the spreading code sequence on the transmitting side and a second timing that lags, by the predetermined phase, the timing of said spreading code sequence;

an interference-component estimation unit for estimating first and second interference components at said first and second timings inflicted by another path upon a prescribed path of interest among multiple paths;

an interference-component elimination unit for eliminating the first and second interference components respectively from said first and second despread signals; and

a phase control signal generator for generating a signal for controlling the phase

of the despreading code sequence on the receiving side based upon the first and second despread signals from which the first and second interference components have been eliminated respectively.

2.(currently amended): The circuit according to claim 1, wherein said interference-component estimation unit estimates the first and second interference component components inflicted by the other path upon a prescribed path of interest based upon a channel estimation value of the other path, an interpath delay time difference between the other path and the path of interest at said first and second timings, and impulse response of the overall transceiver.

3.(cancelled)

4.(currently amended): The circuit according to claim 1, wherein said interference-component elimination unit ~~DLL circuit~~ eliminates only an interference component from another path for which a path-to-path delay-time difference between this other path and the path of interest is less than a threshold value.

5.(original): The circuit according to claim 2, further comprising an impulse response generator for storing impulse response values discretely and outputting an impulse response value that corresponds to an interpath delay-time difference;

wherein said impulse response generator approximates an impulse response value by $1/2^n$ of a peak value (where n is a positive integer) and includes:

a storage unit for storing correspondence between time and n discretely; and

an arithmetic unit for obtaining n of a time that conforms to the interpath delay-time difference and calculating an impulse response value upon shifting the peak value by n bits.

6.(currently amended): The circuit according to claim 1 ~~[[3]]~~, wherein said ~~despreader~~ generates ~~first and second despread signals by despreading the receive signal at a timing that leads, by a predetermined phase, timing of the spreading code sequence on the transmitting side and at a timing that lags, by a predetermined phase, timing of said spreading code sequence;~~
~~said interference component elimination unit eliminates an interference component from each despread signal; and~~
said phase control signal generator obtains the power of ~~[[each]]~~ the first and second despread ~~[[signal]]~~ signals from which the interference ~~[[component]]~~ components ~~[[has]]~~ have been eliminated and generates a signal for controlling the phase of the despreading code sequence on the receiving side based upon a difference between the powers obtained.

7.(currently amended): The circuit according to claim 1 ~~[[3]]~~, wherein said ~~despreader~~ generates ~~first and second despread signals by despreading the receive signal at a timing that leads, by a predetermined phase, timing of the spreading code sequence on the transmitting side and at a timing that lags, by a predetermined phase, timing of said spreading code sequence;~~
~~said interference component elimination unit eliminates an interference component from each despread signal; and~~
said phase control signal generator rotates, on the basis of a channel estimation value of the path of interest, phase of a difference signal between said first and second despread signals from which ~~[[an]]~~ the first and second interference ~~[[component]]~~ components ~~[[has]]~~ have been eliminated respectively, and generates ~~[[a]]~~ the signal for controlling the phase of the despreading code sequence on the receiving side based upon ~~[[a]]~~ said signal obtained by the phase rotation.